ABSTRACT

Methods of producing stable dispersions of single-walled carbon nanotube structures in solutions are achieved utilizing dispersal agents. The dispersal agents are effective in substantially solubilizing and dispersing single-walled carbon nanotube structures in aqueous solutions by coating the structures and increasing the surface interaction between the structures and water. Exemplary agents suitable for dispersing nanotube structures in aqueous solutions include synthetic and natural detergents having high surfactant properties, deoxycholates, cyclodextrins, chaotropic salts and ion pairing agents. The dispersed nanotube structures may further be deposited on a suitable surface in isolated and individualized form to facilitate easy characterization and further processing of the structures.